What is Claimed is:

1   1. A method of analyzing a set of values, comprising:

2   (a) defining a plurality of subsets of contiguous values within the set of values;

3   (b) determining a measure of variation for each of the plurality of subsets to produce a

4   plurality of measures of variation corresponding to the plurality of subsets; and

5   (c) categorizing the set of values based upon an analysis of the plurality of measures of

6   variation.

1   2. The method of claim 1 wherein the set of values is a set of measurement values.

1   3. The method of claim 2 wherein the measurement values are values measured from a

2   communication signal.

1   4. The method of claim 2 wherein the measurement values are values measured from one

2   of an observed substance and an observed event.

1   5. The method of claim 1 wherein the set of values is a set of residual values.

1   6. The method of claim 5 wherein the residual values are the result of numerical analysis

2   of a communication signal.

1   7. The method of claim 5 wherein the residual values are the result of numerical analysis

2   of values associated with one of an observed substance and an observed event.

1   8. The method of claim 1, wherein the set of values is characterized as one of

2   homoscedastic and heteroscedastic.

1   9. The method of claim 1 wherein (a) further comprises:

2   (a.1) defining a range of values not greater than a number of values within the set of

3   values; and

4   (a.2) defining a subset of values by positioning the range at a specific position within the

5   set of values.

1   10. The method of claim 9, wherein (a) further includes:

2   (a.3) varying the size of the range for a plurality of the subsets.

1   11. The method of claim 9, wherein (a) further includes:

2   (a.3) varying the position of the range within the set of values for a plurality of the

3   subsets.

1   12. The method of claim 9, wherein (a) further includes:

2   (a.3) varying the size of the range for a plurality of the subsets; and

3   (a.4) varying the position of the range within the set of values for a plurality of the

4   subsets.

1   13. The method of claim 1 wherein (b) further comprises:

2   (b.1) storing the determined measure of variation.

1   14. The method of claim 13, wherein in (b.1) further comprises:

2   (b.1.1) storing a determined measure of variation in association with a size of the range

3   and a position of the range associated with the subset for which the measure of variation was

4   determined.

1   15. The method of claim 1, wherein in (c) further comprises:

2   (c.1) categorizing the set of values based upon a difference between a measure of

3   variation determined for one of the plurality of subsets and a measure of variation determined for

4   another one of the plurality of subsets.

1   16. The method of claim 1, wherein (c) further comprises:

2   (c.1) categorizing the set of values based upon n-way principal component analysis of the

3   measures of variation determined for the plurality of subsets.

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1   17. The method of claim 1, wherein in (c) further comprises:

2   (c.1) categorizing the set of values based upon visual analysis of a plot of the measures of

3   variation determined for the plurality of subsets.

1   18. The method of claim 17, wherein the visual analysis is based upon patterns within

2   one of a two-dimensional plot and a three-dimensional plot of the measures of variation

3   determined for the plurality of subsets.

1   19. The method of claim 17, wherein a position of a measure of variation within the plot

2   is based upon a size of the subset and a position of the subset for which the measure of variation

3   was determined.

1   20. An apparatus for analyzing a set of values, comprising:

2   (a) a windowing module that defines a plurality of subsets of contiguous values within the

3   set of values;

4   (b) an analysis module that determines a measure of variation for each of the plurality of

5   subsets to produce a plurality of measures of variation corresponding to the plurality of subsets;

6   and

7   (c) an assessment module that categorizes the set of values based upon an analysis of the

8   plurality of measures of variation.

1   21. The apparatus of claim 20 wherein the set of values is a set of measurement values.

1   22. The apparatus of claim 21 wherein the measurement values are values measured

2   from a communication signal.

1   23. The apparatus of claim 21 wherein the measurement values are values measured

2   from one of an observed substance and an observed event.

1   24. The apparatus of claim 20 wherein the set of values is a set of residual values.

1   25. The apparatus of claim 21 wherein the residual values are the result of numerical

2   analysis of a communication signal.

1   26. The apparatus of claim 21 wherein the residual values are the result of numerical

2   analysis of values associated with one of an observed substance and an observed event.

1   27. The apparatus of claim 20, wherein the assessment module characterizes the set of

2   values as one of homoscedastic and heteroscedastic.

1   28. The apparatus of claim 20 wherein the windowing module defines a range of values

2   not greater than a number of values within the set of values.

1   29. The apparatus of claim 20 wherein the windowing module defines a subset of values

2   by positioning the range at a specific position within the set of values.

1   30. The apparatus of claim 28, wherein the windowing module further varies the size of

2   the range for a plurality of the subsets.

1   31. The apparatus of claim 29, wherein the windowing module varies the position of the

2   range within the set of values for a plurality of the subsets.

1   32. The apparatus of claim 20 wherein the analysis module stores the determined

2   measure of variation.

1   33. The apparatus of claim 32, wherein the analysis module stores a determined measure

2   of variation in association with the size of the range and the position of the range associated with

3   the subset for which the measure of variation was determined.

1   34. The apparatus of claim 20, wherein the assessment module categorizes the set of

2   values based upon a difference between a measure of variation determined for one of the

3   plurality of subsets and a measure of variation determined for another one of the plurality of

4   subsets.

1   35. The apparatus of claim 20, wherein the assessment module categorizes the set of

2   values based upon n-way principal component analysis of the measures of variation determined

3   for the plurality of subsets.

1   36. The apparatus of claim 20, wherein the assessment module categorizes the set of

2   values based upon visual analysis of a plot of the measures of variation determined for the

3   plurality of subsets.

1   37. The apparatus of claim 36, wherein the visual analysis is based upon patterns within

2   one of a two-dimensional plot and a three-dimensional plot of the measures of variation

3   determined for the plurality of subsets.

1   38. The apparatus of claim 36, wherein a position of a measure of variation within the

2   plot is based upon a size of the subset and a position of the subset for which the measure of

3   variation was determined.

1   39. A program product apparatus having a computer readable medium with computer

2   program logic recorded thereon for analyzing a set of values, said program product apparatus

3   comprising:

4   (a) a windowing module that defines a plurality of subsets of contiguous values within the

5   set of values;

6   (b) an analysis module that determines a measure of variation for each of the plurality of

7   subsets to produce a plurality of measures of variation corresponding to the plurality of subsets;

8   and

9   (c) an assessment module that categorizes the set of values based upon an analysis of the

10   plurality of measures of variation.

1   40. The program product apparatus of claim 39 wherein the set of values is a set of

2   measurement values.

1   41. The program product apparatus of claim 39 wherein the set of values is a set of

2   residual values.

1   42. The program product apparatus of claim 39, wherein the assessment module

2   characterizes the set of values as one of homoscedastic and heteroscedastic.

1   43. The program product apparatus of claim 39, wherein the assessment module

2   categorizes the set of values based upon a difference between a measure of variation determined

3   for one of the plurality of subsets and a measure of variation determined for another one of the

4   plurality of subsets.

1   44. The program product apparatus of claim 39, wherein the assessment module

2   categorizes the set of values based upon n-way principal component analysis of the measures of

3   variation determined for the plurality of subsets.

1   45. The program product apparatus of claim 39, wherein the assessment module

2   categorizes the set of values based upon visual analysis of a plot of the measures of variation

3   determined for the plurality of subsets.

1   46. A apparatus for analyzing a set of values, comprising:

2   (a) means for defining a plurality of subsets of contiguous values within the set of values;

3   (b) means for determining a measure of variation for each of the plurality of subsets to

4   produce a plurality of measures of variation corresponding to the plurality of subsets; and

5   (c) means for categorizing the set of values based upon an analysis of the plurality of

6   measures of variation.

1   47. The apparatus of claim 46 wherein the set of values is a set of measurement values.

1   48. The apparatus of claim 46 wherein the set of values is a set of residual values.

1   49. The apparatus of claim 46, wherein means (a) characterizes the set of values as one

2   of homoscedastic and heteroscedastic.

1   50. The apparatus of claim 46, wherein in means (c) further comprises:

2   (c.1) means for categorizing the set of values based upon a difference between a measure

3   of variation determined for one of the plurality of subsets and a measure of variation determined

4   for another one of the plurality of subsets.